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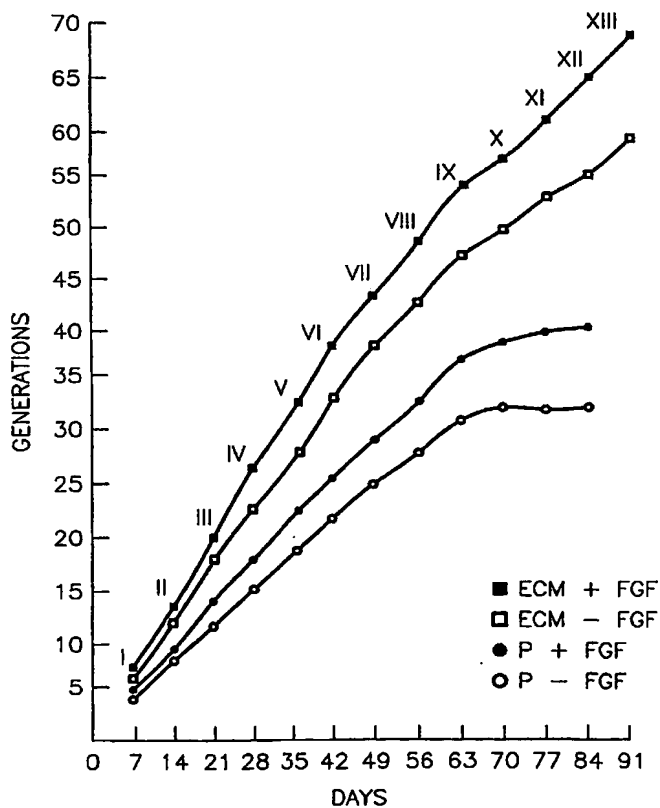
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[Continued on next page]

(54) Title: **HUMAN CORNEAL ENDOTHELIAL CELLS AND METHODS OF OBTAINING AND CULTURING CELLS FOR CORNEAL CELL TRANSPLANTATION**



(57) Abstract: A method for isolation of human corneal endothelial cells by non-enzymatic harvesting and culturing of endothelial cells in vitro from critical density in a system consisting of extracellular matrix protein coated plastic dishes and growth factor enriched culture medium are used to generate expanded sub-populations of endothelial cells for cell replacement procedures or transplantation in denuded donor corneas. Special procedures are included in the process for the removal of the native corneal endothelium from the donor corneas and the seeding of the culture corneal endothelial cells onto the denuded corneas for transplantation purposes.

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